Method: Retrospective study in two referral centres, including all patients undergoing closure of interatrial right-to-left shunt associated with hypoxaemia.

Results: Since 2001, 21 consecutive patients underwent interventional shunt closure usingthe ''Amplatzer® device''; two patients had atrial septal defect and 19 had patent foramen ovale. Three patients had minor adverse events; two patients have a tiny residual shunt. Transcutaneous oxygen saturation and partial oxygen pressure increased significantly from 86 ± 5 to 95 ± 3% ($p < 0.001$) and from 49.8 ± 6.8 to 82.9 ± 30.4 mmHg ($p = 0.001$), respectively. Seventeen (80%) patients reported clinical improvement. However, patients with chronic respiratory insufficiency remained more symptomatic, with three deaths after a median follow-up of 35 (6–97) months and 89% remaining in New York Heart Association class III/IV (vs 29% of patients without chronic respiratory insufficiency; $p = 0.035$).

Conclusion: Hypoxaemic shunts are treated effectively by transcatheter closure, resulting in functional improvement in patients without respiratory insufficiency. When associated with chronic respiratory insufficiency, hypoxaemia often persists after shunt closure. In such cases, the right-to-left atrial shunt does not seem to be the main cause of hypoxaemiaand the indication for closure is questionable.

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Clinical outcome of familial hypercholesterolemia (FH) at King Abdulaziz Medical City, Riyadh-A 20 year experience

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Familial Hypercholesterolemia (FH), is a well recognized risk factor for premature atherosclerosis and increased cardiovascular mortality. Prevalence of FH and FHrelated cardiovascular adverse clinical outcomes in the Saudi population are unknown.

The aim of this study is to evaluate; epidemiological aspects, current management practices and clinical outcomes of FH over a 20-year-period, in King Abdulaziz medical city-Riyadh (KAMC-R).

This is a retrospective, chart review study that includes patients of both genders and all ages, who have been clinically diagnosed as FH or have had significantly elevated cholesterol level, after excluding secondary causes of hypercholesterolemia. Potential study candidates between January 1990 and December 2010 were identified through hospital information system and laboratory database. Study population was limited to a subgroup of patients who have an LDL-C $\geqslant$10 mmol/l as a potential homozygous phenotype, representing the highest risk population who deserves special medical attention. A set of predetermined demographic, clinical and laboratory variables were meticulously extracted from paper charts and electronic medical records. Out of 1227 discharge diagnosis of FH and 29,196 laboratory database candidates of LDL-C >4 mmol/l, 31 subjects met the study criteria. All patients are Saudi Nationals with mean age of 23 years and 52% being males. Xanthoma was documented in 87% with mean baseline LDL-C of 16.5 mmol/l and latest available mean LDL-C of 14 mmol/l. Statins were used in 94%, while longterm apheresis therapy was performed for 2 individuals (7%) and none of the study population underwent liver transplantation. Ten (32%) patients with mean age of 21 years underwent cardiac surgical interventions in form of CABG, mostly in combination with different valve replacement procedures. Seven patients (23%) were either documented to be dead or lost to follow up.

The demographic distribution, clinical features and laboratory parameters are highly suggestive of Homozygous FH in the majority of study population. This large number of potential Homozygous FH in a small Saudi community is highly suggestive of increased prevalence of FH in the Saudi population at large as compared to the western countries. The reported adverse clinical outcomes in conjunction with persistently elevated LDL-C level may reflect the substandard lipid lowering strategies being delivered to this population.

National FH registry and comprehensive FH management program are strongly recommended for urgent implementation.

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Association of khat chewing with significant coronary artery disease in patients presenting with heart failure

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Background: Khat has been associated with higher rates of heart failure among patients presenting with acute coronary syndrome (ACS). Coronary artery spasm was the mechanism by which khat worked to induce ACS in laboratory animal. In human; there is still lack of data about this mechanism.

Objective: To evaluate the effect of khat chewing on the coronary arteries in patients with history of heart failure using coronary arteriography (CAG).

Patients and methods: Cross sectional observational prospective study. All patients who underwent CAG as elective one day procedure at Al-Thawra Modern General Hospital, Cardiac Center, over the period from April 2011 to August 2011 were included in our study.

Results: Out of total 365 patients, 109 (30%) had history of heart failure before CAG. The mean ± SD for the age in years was 57.64 ± 9, with 66% male. Ischemic heart disease was the cause of heart failure in 70 patients, 26 patients had valvular heart disease and 13 patients had other causes of heart failure. History of khat chewers was positive in 86 patients (79%). Khat chewers were more likely to be men (79% vs. 17%) and had chest pain in their presentation before CAG (70% vs. 43.5%)

compared with non-khat chewers. Khat chewers were more likely to be smokers and smokeless tobacco (shamma) users. Obesity and overweight was more prevalent in khat chewers. Left ventricular contractility (LVEF %) was lower in khat chewers compared with non-khat chewers. Anatomically significant coronary artery lesions ($\geqslant$50%) were more prevalent in khat chewers (74% vs. 26%, odds ratio, 4.3; 95% confidence interval, 1.5–12; $P = 0.005$) and physiologically significant lesions ($\geqslant$70%) were also more prevalent in khat chewers (55% vs. 22%; odds ratio, 4.3; 95% confidence interval, 1.4–12;

$P = 0.008$) compared with non-khat chewers. Furthermore, the extent of coronary artery disease (CAD) was higher in khat chewers. The previous observations remained significant even after restriction of the traditional risk factors for CAD like diabetes mellitus, hypertension, smoking, family history of CAD, and obesity.

Conclusion: Khat chewing was prevalent among heart failure patients and was associated with more significant and higher extent of CAD and could be considered as independent risk factor for CAD in patients with heart failure.

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Echocardiographic pearl a rare complication of infective endocarditis one of the rarest complication of infective endocarditis being diagnosed by echocardiography

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Our patient is a 41 years old male, born and living in Cairo, working as a constructor worker and has 3 children the older of which is 13 years old. He was admitted to the internal medicine department by fever and shortness of breath for about 1 week associated with weakness of his right upper limb for 12 h before his presentation which made him sought medical advice. He was not known to be hypertensive nor diabetic.He was a heavy Cigarette and Shesha smoker for about 17 years .He denied history of any substance abuse. He has no family history of any cardiac disease O/E: The patient appeared pale, toxic, orthopenic, a little confused however he was oriented to time, place and persons.There was mild weakness of his right upper limb with intact sensation. BP: 100/70 bilaterally, HR: 110, regular, of average volume, peripherally felt, Temp: 38.8 °C, RR: 20/min. Bilateral fine basal rales on deep inspiration, Normal abdominal examination.

Cardiac examination: The cardiac impulse was hyperdynamic at the 5th intercostal space just outside the midclavicular line with no palpable thrill. Auscultation revealed S3 gallop apically with grade III–IV pan systolic murmur radiating to the anterior axillary line.

Investigations: Hgb: 11.2,WBC's: 13,000, Platelet count: 270,000. Total billirubin: 1.1, BUN: 17, Creat: 1.4, Na: 135, K: 3.9, SGOT: 45, SGPT: 37.

Discussion: Left atrial dissection (LAD) is a rare complication and the literature reveals only a small number of cases. LAD is by Gallego et al. as a gap from the mitral or tricuspid annular area to interatrial septum or left atrial wall, creating a new chamber with or without communications into the true left or right atrium. The most common etiology of LAD is mitral valve surgery.

Debridement of much calcified valves annulus, improper suturing of the annulus to the prosthetic cuff, excessive traction on sutures in the posterior annulus, and the hemodynamic influence of the paraprosthetic leak extended the dissection into the left atrial wall, developing a false cavity. Also left atrial thrombectomy can be associated with injury to the left atrial endocardium as a mechanism of primary tear.A rare case of left atrial dissection as a consequence of infectious endocarditis was reported. They present a patient with infectious endocarditis with involvement of mitral and aortic valves; in whom the trans-esophageal echocardiography was able to visualize the left atrial dissection.

The LA has a venous component that receives the PVs, a fingerlike atrial appendage, and shares the septum with the right atrium. The major part of the atrium, including the septal component, is relatively smooth-walled whereas the appendage is rough with pectinate muscles. The smoothest parts are the superior and posterior walls that make up the pulmonary venous component, and the vestibule. Seemingly uniform, the walls are composed of one to three or more overlapping layers of differently aligned myocardial fibers, with marked regional variations in thickness. Why the posterior wall of the left atrium:A sagittal section through the left atrium of a cadaver shows the proximity of the esophagus to the posterior wall of the left atrium The wall is particularly thin at the level of the superior pulmonary veins. Clinical presentation may be the appearance of a new systolic murmur, associated with or without symptoms of heart failure and low-output manifestations, hours to days after the operation but there were patients in whom clinical onset occurs years after surgery. Rarely, LAD can be an incidental finding on TEE in an asymptomatic patient.

LA dissection typically appears as a hypoechoic space from the mitral/tricuspid origin extending along the interatrial septum or LA wall. M-mode is excellent at distinguishing subtle movement of the intima or the endocardium in relation to the cardiac cycle. Similar to what is seen in aortic dissections, the false cavity is compressed during systole as the LA is being filled.

Other entities that should be considered when an LA mass is visualized are:

Thrombi most common left atrial myxoma, cysts, coronary aneurysms. Pericardial blood impinging on the LA wall may mimic these findings.

Color flow Doppler can be used to examine the endocardium for a tear and point of communication with the chamber. Pulsed wave Doppler can also be used to identify flow across a tear. TEE is the diagnostic modality of choice for LAD.

No definitive criteria exist to help guide management of LAD. Prompt surgical repair is usually required